

BC BREWERS RECYCLED CONTAINER COLLECTION COUNCIL

Annual Report to the Director

2019 Calendar Year



Submitted to: **Executive Director**
Environmental Standards Branch
Ministry of Environment
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BRCCC 2019 Product Stewardship Report to the Executive Director, Environmental Standards Branch

1. Executive Summary

Products within plan:	Refillable Glass Beer, Cider & Cooler Containers, Metal Beverage Alcohol Cans and Secondary Packaging
Program website:	http://www.EnviroBeerBC.com

Recycling Regulation Reference	Topic	Summary (5 Bullet Maximum)
Part 2, Section 8(2)(a)	Public Education Materials & Strategies Schedule 1 & 5	<ul style="list-style-type: none"> • Consumer awareness survey results indicate 93% awareness in Schedule 1 program and 61% awareness in Schedule 5 program • Released can and bottle recycling videos providing tips on returning empty containers and associated packaging and showed what happens to those containers after they have been returned • Updated posters displayed at return locations to include messaging around returning secondary packaging
Part 2, Section 8(2)(b)	Collection Systems & Facilities Schedule 1 & 5	<ul style="list-style-type: none"> • BRCCC delivers beer to retail locations and licensed establishments and collects containers at retail locations, licensed establishments and container depots • BDL operates a warehouse facility and delivery vehicles in BC • There are 1,140 container redemption facilities for BRCCC program containers in the province; see tables 1 and 2 for breakdown by return location type and by regional district, respectively
Part 2, Section 8(2)(c)	Product Environmental Impact Reduction, Reusability & Recyclability Schedule 1 & 5	<ul style="list-style-type: none"> • All primary containers are either reused or recycled • All associated secondary packaging is returnable and recyclable • Estimated waste diversion rate of 20,378 TN, avoided 86,532 TN of CO₂E associated with containers
Part 2, Section 8(2)(d)	Pollution Prevention Hierarchy & Product Component Management Schedule 1 & 5	<ul style="list-style-type: none"> • Reduction of new materials used continues to be recognised through the reuse of refillable bottles • Brewers receiving bottles for refilling have expressed intent to continue to refill those containers • 100% of aluminum containers collected were recycled in 2019 • 100% of refillable glass collected is either sent for intended re-use by brewers or recycling (99% sent to brewers for re-use, 1% sent directly to a glass recycler for recycling) • 100% of material reported as collected packaging, sent to a recycler for recycling
Part 2, Section 8(2)(e)	Product Sold and Collected & Recovery Rate Schedule 1 & 5	<ol style="list-style-type: none"> 1. 708.9 million containers sold and 643.4 million containers recovered 2. 90.76% recovery rate 3. For over a decade, the overall return rate has been maintained well over the recovery target for containers 4. 78.32% Secondary Packaging recovery rate
Part 2, Section 8(2)(e.1)		See Section 7 for estimated breakdown per regional district.

Part 2, Section 8(2)(f)	Summary of Deposits & Refunds Schedule 1	Deposits Received: \$73,021,937 Deposits Refunded: \$64,397,788 Audit of B.C. Brewers' Recycled Container Collection Council Financial Statements and audit procedures in connection with Sections 8(2)(b), (d), and (e) of the Recycling Regulation and deposits received and refunds paid conducted by KPMG LLP.
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Comparison of Key Performance Targets		
Part 2 – Section 8(2)(g); See full list of targets in Plan Performance		
Priority Stewardship Target (as agreed with Ministry File Lead)	Performance	Strategies for Improvement
1. <u>Container Return Rates</u> 87.5% recovery/collection rate in each container category	<u>Targets Partially Achieved:</u> <ul style="list-style-type: none"> • 101.86% return rate for refillable industry standard bottles (ISB) • 86.41% return rate for refillable proprietary glass bottles • 90.38% return rate for aluminum cans • 90.76% return rate overall 	<ul style="list-style-type: none"> • Improve strategy for collection of refillable proprietary glass bottles • Continue to communicate with brewers and collection network regarding categorization of containers
2. <u>Secondary Packaging Return Rates</u> 75% Recovery/Collection rate of secondary packaging material	<u>Target Achieved:</u> <ul style="list-style-type: none"> • 78.32% recovery/collection rate attained for secondary packaging 	N/A
3. <u>Consumer Accessibility for Containers</u> Improve consumer access to BRCCC return locations to 385 (305 LRS, 80 depots) with at least 1 contracted return location in each regional district	<u>Targets Partially Achieved:</u> <ul style="list-style-type: none"> • 183 return locations (112 LRS, 71 depots) • 26 of 28 regional districts with at least 1 contracted return location 	<ul style="list-style-type: none"> • Reviewing current coverage levels to identify key areas for depot expansion • Perform additional drive time studies to identify potential areas that require increased coverage
4. <u>Consumer Accessibility for Secondary Packaging</u> 1,152 total return locations	<u>Target Partially Achieved:</u> <ul style="list-style-type: none"> • 1,140 total return locations in the BRCCC network • Materials received from Recycle BC are collected through the Recycle BC network which includes additional collection locations not included in the 1,140 reported in the BRCCC network 	<ul style="list-style-type: none"> • Add incremental collection sites to the BRCCC collection network in potential areas that require increased coverage.

<p>5. <u>Consumer Accessibility for Drive Time</u></p> <p>80% of population within 10 minute drive of BRCCC authorized return location</p>	<p><u>Target Achieved:</u></p> <ul style="list-style-type: none"> 80% of population within a 10 minute drive of a BRCCC authorized return location 	<p>N/A</p>
<p>6. <u>Consumer Awareness: Promotion/Education Initiatives</u></p> <p>3 net new consumer promotion/education initiatives throughout the Schedule 1 & 5 plans</p>	<p><u>Target Achieved:</u></p> <ul style="list-style-type: none"> At least one net new consumer promotion/education initiative rolled out in each program year 	<ul style="list-style-type: none"> Continue to promote the collection system and educate the public to increase awareness
<p>7. <u>Consumer Awareness: Level of Consumer Awareness</u></p> <p>60% level of consumer awareness on consumer awareness survey</p>	<p><u>Target Achieved:</u></p> <ul style="list-style-type: none"> 61% consumer awareness survey result 	<p>N/A</p>
<p>8. <u>Pollution Prevention</u></p> <p>100% of collected materials for re-use or to recycling commodity markets</p> <p>Secondary Packaging:</p> <ul style="list-style-type: none"> Report in accordance with PHP Track end fate of materials in annual stewardship audit 	<p><u>Targets Achieved:</u></p> <ul style="list-style-type: none"> Aluminum: 100% processed for metal recovery Refillable Glass Bottles: <ul style="list-style-type: none"> 99% of material shipped, sent to brewers for reuse (100% of which were intended to be refilled) 1% of material shipped, sent directly to a glass recycler for recycling by BDL 100% of material reported as collected, sent to a recycler for recycling 	<ul style="list-style-type: none"> Continue to ensure service providers meet processing standards Work with brewers and other collection locations to strengthen reporting and tracking systems

2. Program Outline

The BC Brewers Recycled Container Collection Council (BRCCC) is a not-for-profit BC society, whose members represent over 95% of overall beer production in BC and the majority of import production. Those producers appointing BRCCC as their stewardship agency under Schedule 1 and Schedule 5 of the *Recycling Regulation* are comprised of breweries and other beverage alcohol manufacturers, including those operating in the province in addition to import brewers who designate BRCCC as their product steward when they obtain LDB approval to sell their products in BC.

Brewers Distributor Limited (BDL) is a joint venture company owned by Labatt Breweries of Canada and Molson Coors Canada that provides distribution services throughout Western Canada for the majority of brewers that sell into British Columbia. BDL operates warehouses and distribution facilities throughout British Columbia and distributes beer to provincially licenced liquor stores including government-run Liquor Distribution Branch (LDB) outlets, private licensee retail stores (LRS) and LDB rural agency stores (private businesses authorized by the LDB to sell liquor with other goods in small or remote communities) as well as bars, restaurants, and other licensed establishments.

BDL acts as the service provider to BRCCC, operating the stewardship program. On behalf of the BRCCC, BDL collects refillable glass beer, cider, and cooler bottles as well as imported & domestic metal beverage alcohol cans sold in British Columbia and the secondary packaging that accompanies those items (beer cases etc.). This recovery happens predominately in conjunction with the distribution of full goods, with container returns occupying trailers returning from delivering full goods to retail and private sites.

BDL's return collection includes the beer industry standard refillable glass bottle (ISB), non-standard proprietary refillable beer, cider, and cooler bottles and metal beverage alcohol cans as well as the packaging that accompanies these containers, and the packaging associated with non-refillable beer containers as applicable. BDL's distribution and collection also extends to beer kegs. Beverage alcohol sold in these containers includes a deposit which is paid by the consumer at the point of purchase and returned at the point of return. BRCCC has also established a cost recovery mechanism for cans and secondary packaging, which funds BRCCC's product stewardship functions through its subscribers. All costs associated with BRCCC and its container recovery system are internalized in brewers' operating costs and are not passed on to the consumer in addition to retail prices.

Consumers are able to return all program containers and associated packaging to any retail location where beer is sold or to a BRCCC authorized container return depot. BDL collects containers and packaging from these retail locations and authorized depots, as well as from licensees like bars and restaurants. Intact refillable containers are returned to the brewers to be reused in the brewing process, while damaged or broken bottles are sent to be recycled into new, high-end products including new bottles and fibreglass insulation. Aluminum cans are compacted and were sent to be recycled into new cans and other aluminum based products. Paper packaging is sent to a number of recyclers to be turned into liner board used to make drywall, boxboard rolls to create packaging such as cereal boxes and tissue rolls.

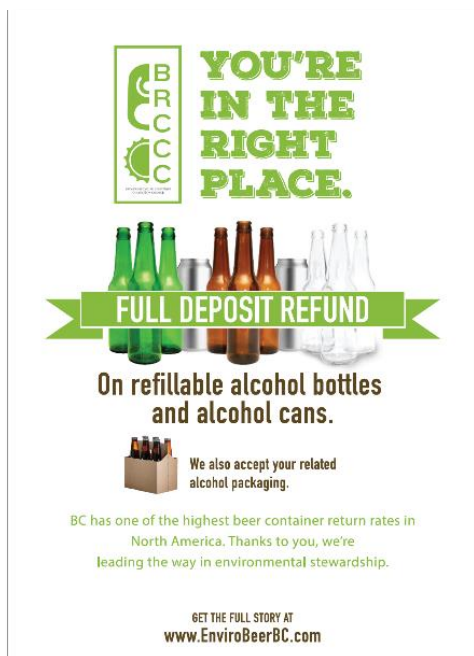
Information on BRCCC's product stewardship systems can be found at www.EnviroBeerBC.com.

3. Public Education Materials & Strategies

BRCCC continues to enjoy high consumer awareness levels in BC for its recovery program, with very high levels of consumer satisfaction with regard to service at return locations. In 2019, the BRCCC undertook a consumer awareness survey with respect to its container (Schedule 1) and secondary packaging (Schedule 5) stewardship programs in BC. Based on these results, BRCCC's

program for beer containers was very well-known with 93% of respondents being aware of the deposit program for beverage alcohol containers. BRCCC also hit the consumer awareness target in the Schedule 5 plan with 61% of respondents knowing that the original packaging of these containers can also be returned. With the Schedule 5 program being in its early years, the BRCCC will continue to create awareness about packaging recovery in BC.

In 2017, BRCCC's consumer awareness strategy focused on reinforcing the effectiveness of the container recovery program while at the same time introducing the complimentary secondary packaging program that was approved by the B.C Ministry of Environment in late 2016. The secondary packaging program was launched in 2017 and saw a number of announcements and updates made to help educate stakeholders about the program. To aid in the education of consumers, new posters (shown below) were developed in 2019 to display at return locations to include messaging around returning secondary packaging. Overall, BRCCC continued efforts to a) educate stakeholders – principally the consumer – about BRCCC and how its stewardship system operates and the environmental benefits it delivers; and b) promoting the authorized return locations within its stewardship network.



BRCCC continued to work with ABLE BC to secure additional private retail liquor locations to support collections. ABLE BC regularly informs their members of this benefit through newsletters, publications and surveys.

In 2019, the BRCCC released can and bottle recycling videos on its website www.EnviroBeerBC.com providing tips on returning empty containers and associated packaging and showed what happens to those containers after they have been returned. BRCCC continued supply program "swag" such as coasters, beer cozies, and frisbees to several events and conferences to drive awareness of the programs.

Finally, BRCCC continues to maintain its membership in the Stewardship Agencies of BC (SABC). As a member of SABC, BRCCC funds the Recycling Council of BC's (RCBC) various consumer information vehicles, such as the Recycling Hotline, the RCBC website and the Recyclepedia. BRCCC also directs consumers to the 'BC

Recycles' portal as a one-stop location for information on recycling in BC.

4. Collection System and Facilities

Consumers can return all program containers and related secondary packaging to BRCCC Authorized Depots, Licensee Retail Stores (LRS), Government Liquor Stores (GLS) and Rural Agency Locations (RAL) for their deposit redemption. BRCCC, through BDL, also provides on-site collection services through thousands of licensed establishments (i.e. restaurants and bars). Table 1 provides the number and type of operating collection facilities within the province. In 2019, BDL performed the collection, sorting, and storage of containers from one warehouse location. Transport and distribution of product and collection of containers is supported by a fleet of BDL vehicles as well use of third party carriers, where required. BRCCC also accepts all secondary packaging associated with containers for return and recycling.

Table 1 – BC Container Redemption Locations for Beer Containers & Secondary Packaging

Return Location Type	2019	2018
BDL Authorized Depots	71	73
Licensee Retail Stores	651	649
Government Liquor Stores	198	200
Rural Agency Locations	220	223
Grand Total	1140	1145

Currently, there are 1,140 retail and authorized depot redemption centres available for container collections across British Columbia. This is a reduction of 5 locations from 2018 due to a location move or changes to ownership. BRCCC, through BDL, continues to monitor coverage levels to identify key areas for LRS contracted expansion that would improve the consumer experience as well as overall productivity of the program. BRCCC facilitates a high rate of return of containers through its convenient and numerous collection facilities within all regional districts of British Columbia, as outlined in Table 2.

Table 2 – Number of Collection Locations by Regional District

Regional Districts	2019 (All Locations)	2018 (All Locations)	2019 (Contracted Locations)	2018 (Contracted Locations)
Alberni - Clayoquot	17	17	7	7
Bulkley - Nechako	20	19	6	5
Capital	83	85	16	16
Cariboo	41	40	6	6
Central Coast	4	4	0	0
Central Kootenay	42	42	5	5
Central Okanagan	50	50	7	7
Columbia - Shuswap	36	37	2	2
Comox Valley	24	24	5	5
Cowichan Valley	29	30	8	8
East Kootenay	33	35	2	2
Fraser - Fort George	38	36	14	14
Fraser Valley	77	74	9	8
Metro Vancouver	295	297	45	45
Kitimat - Stikine	17	17	8	8
Kootenay Boundary	17	17	0	0
Mount Waddington	17	18	1	1
Nanaimo	48	47	6	6
North Okanagan	32	32	2	2
Northern Rockies	4	4	2	2
Okanagan - Similkameen	38	37	5	5
Peace River	31	31	4	3
qathet	12	12	1	1
North Coast	11	12	3	4
Squamish - Lillooet	19	20	4	4
Strathcona	28	31	6	7
Sunshine Coast	15	15	4	4
Thompson - Nicola	62	62	5	5
Grand Total	1140	1145	183	182

In 2018, the BRCCC conducted a drive time study and concluded that 80% of British Columbia residents are within a 10 minute drive of a BRCCC authorized return location. Consumers can visit www.EnviroBeerBC.com/Locations/ to search for the closest authorized BRCCC Depot or retail location by postal code.

With the introduction of Schedule 5, secondary packaging, some material is also sourced in accordance with contractual arrangements between BRCCC and other recyclers. In 2019, a large portion, 1,000 tonnes (2018: 1,250 tonnes) of material was acquired from Recycle BC in the calendar year. This helps to capture the secondary packaging associated with one-way glass containers and other beer and cider packaging that may not have otherwise come back with the containers. This material was collected via the Recycle BC network and therefore collected at even more collection locations than outlined in the tables above.

5. Product Environmental Impact Reduction, Reusability and Recyclability

The brewers of British Columbia hold environmental awareness and preservation in high regard. The industry has taken back containers and packaging since brewers started brewing in the province over 130 years ago; the practice continues today. The foundation of BDL's business strategy remains the efficient collection and recycling of containers and packaging and maximizing return rates, which helps achieve environmental goals, and ensures fewer raw materials are in use in the brewing process. Providing consumers with the ability to take-back returns at retail establishments generates high returns on containers and packaging and does so in a cost-effective manner. Coordinating the redistribution of trailer space between full goods and returned containers reduces fuel consumption, which minimizes environmental impact and operating costs. The cost-effectiveness of the system enables the brewing sector to maintain production in refillable containers and encourages new brewers in BC to use refillable over non-refillable containers. Each new entrant who chooses to use refillable containers continues to shrink the environmental impact of the industry and contributes to its exceptional return rates.

The pillar of BDL's business model is the recovery rates of the containers and by extension the related secondary packaging as the majority of the bottles returned to a collection location are done so in their original packaging. All secondary packaging produced by brewers in BC is 100% recyclable and by returning it to a collection location along with the containers, it ensures that cardboard and plastic are being kept out of landfills. Through the network of return locations, these resources are able to be optimized for high-end recycling and sold back to industry to be used again.

In order to maximize the efficiency of the production cycle, the Canadian beer industry has developed an industry standard bottle (ISB), which is available to every brewer in the country. The use of a standard bottle limits the need and cost for specialized handling and storage of bottles returning to different brewers and significantly improves the production efficiencies by eliminating the need for brewers to perform costly packaging line changeovers. Presently there are numerous western Canadian breweries that are signatories to the Standard Mould Bottle Agreement (sometimes referred to as the Industry Standard Bottle Agreement) and sell their products in the ISB. The economic efficiency of the British Columbia brewers' reuse and recycling system extends its benefits as savings to the consumers and to the environment.

BRCCC's container redemption system generates one of the highest return rates for aluminum cans in North America. Producing cans from recycled aluminum instead of virgin aluminum reduces the energy resources used and pollution produced.

The secondary packaging (the outer box) is more than just packaging in this circular economy. As long as the case is intact, these cases also act as the transportation vessel that the refillable containers travel back to brewers in.

6. Pollution Prevention Hierarchy and Product / Component Management

The Schedule 1 product stewardship plan outlines two types of containers to be used by the BRCCC brand owners: refillable glass bottles and recyclable metal (principally aluminum) cans. According to the expanded hierarchy of material management, reuse and recycle are among the most favourable forms of prevention (see Figure 1)¹. BRCCC remains committed to ensuring the use of 100% recyclable and non-toxic containers, each with their own well-established secondary markets. The long-standing history of the refillable glass bottle along with its substantial environmental benefits sets its precedent as the preferred container type among brewers, especially when compared to one-way glass containers. Each time a glass bottle is reused, the total amount of raw materials needed is reduced, as well as the energy resources needed to produce new glass stock. This helps the beer industry significantly reduce its CO₂ emissions and save significant amount of energy. Operationally, the washing and cleaning of refillable bottles requires much less energy and water than that of producing new glass. For each tonne of aluminum recycled, over 200 GJ of energy are saved in avoided production processes including: bauxite mining, alumina refining, and electrolysis².

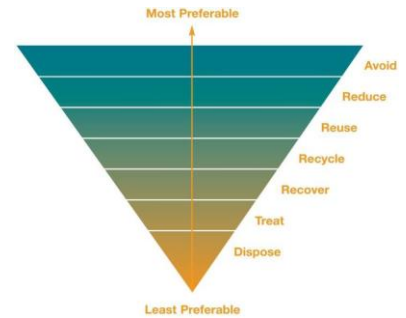


Figure 1 Pollution Prevention Hierarchy

The number of refillable glass bottles shipped to brewers for re-use is tracked and recorded by BDL, as well as the weight of broken or culled glass shipped directly to glass recyclers. BDL's records also include the weights of aluminum cans that are crushed into "biscuits" and shipped to aluminum recyclers. In 2019, 100% of the aluminum and glass containers sent from BDL to recyclers was recycled. By reusing and recycling containers and packaging, then releasing the containers back into the market, brewers maintain their commitment to the environment and ensure that the recycling operations done by BDL are utilized to the fullest. Table 3 shows the results for the materials recovered in 2019.

Table 3: Results of Recovered Containers & Packaging 2019³

Type of Container	Results of Recovered Material	
Aluminum Cans	100% Processed for metal recovery	
Refillable Glass Bottles	100% of the material sent to brewers were intended to be refilled	
	99% of material shipped, sent to brewers for reuse	1% of material shipped, sent directly to a glass recycler for recycling by BDL
Secondary Packaging	100% of material reported as collected, sent to a recycler for recycling	

BRCCC's product stewardship system for containers also results in energy savings and reduced greenhouse gas (GHG) emissions, which are significant and are outlined in Table 4. The estimated GHG reductions associated with the program's recycling and reuse in 2019 are equivalent to pulling over 18,695⁴ cars off of provincial roads.

¹ See Zero Waste SA: South Australia's Waste Strategy 2011-2015. 2011 Report

² PE Americas. Life Cycle Impact Assessment of Aluminum Beverage Cans. 2010 Report.

³ Results of Recovered Containers reviewed by KPMG LLP

⁴<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

Table 4 - Energy, Greenhouse Gas, and Avoided Pollutants Associated with BRCCC Container Recovery 2019

Pollution Prevention Metric	Glass Reuse & Recycling	Aluminum Recycling	Total Diversion
Weight of Materials Diverted (tonnes)	11,888	8,490	20,378
Avoided GHG Emissions (MT-CO2-eg)	4,517	82,014	86,532
Avoided Energy Consumption (GJ)	80,836	741,696	822,532
Avoided Pollution - Nitrogen Oxides (tonnes)	21	267	287
Avoided Pollution - Sulphur Oxides (tonnes)	73	775	848
Avoided Pollution - Particulate Matter (tonnes)	44	269	313
Avoided Pollution - Solid Waste (tonnes)	792	36,482	37,274

Note: Figures in table have been rounded

The significant environmental savings associated with recycling aluminum extend from energy reduction to direct atmospheric emissions. Nitrogen oxides, sulphur dioxides, and particulate matter emissions are reduced by over 60%, 90% and 95% respectively when aluminum products are made from recycled materials. In 2019, the estimated total emission reductions of nitrogen oxides, sulphur oxides and particulate matter from recycling aluminum and reusing glass bottles in BC are 287, 848, and 313 metric tonnes respectively.

Additionally, the production of aluminum generates solid waste that is four and a half times heavier than the resulting aluminum. The BRCCC container recovery system ensures the reduction of significant quantities of virgin aluminum or glass production through reuse and recycling. An estimated 37,274 metric tonnes of solid waste were prevented in 2019 as a result of BRCCC's container management. The prevented waste is also in addition to the approximately 20,378 tonnes of reused or recycled materials already diverted from provincial landfills in 2019 as a result of BRCCC's efforts. Combined, these totals represent BRCCC's accumulative impact of roughly 57,652 tonnes of reduced solid waste production annually – equivalent to approximately \$6.2 million in Vancouver tipping fees⁵. In summary, BRCCC continues to deliver outstanding results for British Columbia's environment through its product stewardship program.

In 2017, BRCCC began to run a schedule 5 program to recover secondary packaging associated with beer and cider (refillable and one-way containers), the vast majority of this packaging is boxboard/cardboard, such as can cases and beer boxes. These materials are then sent to a recycler and eventually make their way into a variety of products including cereal boxes and drywall components.

7. Product Sold and Collected and Recovery Rate

Return, reuse and recycling rates for all BRCCC container categories exceeded the 75% mandated target set under the Environmental Management Act. Industry Standard bottles achieved a return rate of over 100%, attributable to an increase in seasonal sales (December purchases returned in January). Refillable proprietary bottle return rate, which represent only 2.4% of total sales, were slightly below Plan targets at 86.41%.

In 2019, BRCCC's product stewardship plan collected over 643 million containers with an overall program return rate of 90.76%. For over a decade, the overall return rate has been maintained well over the recovery target. Table 5 outlines a summary of the recovery rate by container type for 2019.

⁵ Based on Vancouver 2019 tipping fee of \$108 per tonne for waste disposal.

http://www.metrovancouver.org/boards/Bylaws1/GVSDD_Bylaw_323_Amendment_306.pdf

Table 5a – BRCCC Container Recovery Rates 2019⁶

Container Type	Sales Dozens	Returns Dozens	Recovery Rate (%)
Cans	55,210,900	49,900,119	90.38%
Refillable Glass Containers			
Industry Standard Bottles	2,431,826	2,476,963	101.86%
Non-Standard Bottles	1,436,144	1,240,990	86.41%
Total Refillables	3,867,970	3,717,953	96.12%
Total All Containers	59,078,870	53,618,072	90.76%

Note: Figures in Table 5 have been rounded

Table 5b – BRCCC Secondary Packaging Recovery Rates 2019⁶

Packaging Type	Tonnes Generated	Tonnes Recovered	Recovery Rate (%)
Secondary Packaging	3,893	3,049	78.32%

Secondary Packaging and Other Containers

BRCCC is proud to have been collecting and recycling secondary packaging now included in Schedule 5 (Packaging and Printed Paper) of the BC Recycling Regulation for decades prior to its enactment. Since 2017, in addition to refillable beer containers and alcohol containers, the BRCCC has been running a program that formally includes the collection of all secondary packaging associated with those containers as well as imported beer and ciders. BRCCC provides a return and recycle option for all associated packaging related to every product sold to customers.

BDL also sells and facilitates the collection and recycling of beer kegs. In 2019, BDL sold approximately 237,455 kegs primarily to licensed establishments. The efficiency of the closed loop collection system offered by BDL ensures similar results for kegs as other stewardship program containers. In 2019, the return rates for these container types were in excess of 101%. This volume is equivalent to over 3.4 million cases of packaged beer⁷, which translates to approximately 539 tonnes of aluminum or 10,810 tonnes of glass bottles⁸.

Table 6 provides estimated values of program diversion by regional district. As BRCCC does not compile sales of collection data by Regional District, the values for diversion estimates were assumed to follow the per capita distribution for each district. Population distribution estimates for 2019 were obtained from the BC Stats website⁹.

⁶ Data reviewed by KPMG LLP. Sales were provided by the BC Liquor Distribution Branch (LDB)

⁷ Assumed 58.67L Kegs and 12 x341 glass bottles as a package

⁸ Assumed 7lbs/case of glass bottles and 1lbs per 33 355ml cans

⁹ Source: <https://www2.gov.bc.ca/gov/content/data/statistics/people-population-community/population/population-estimates>

Table 6 - 2019 Program Diversion Estimates by Regional District (Based on Collected Materials)

Regional District	Aluminum Units (000)	Aluminum Weight (Tonnes)	Glass Units (000)	Glass Weight (Tonnes)	Total Units (000)	Total Schedule 1 Weight (Tonnes)	Secondary Packaging Weight (Tonnes)	Total Weight (Tonnes)
Alberni-Clayoquot	3,934	54	293	78	4,227	132	20	152
Bulkley-Nechako	4,677	64	349	92	5,026	157	24	180
Capital	49,416	679	3,682	974	53,098	1,653	252	1,905
Cariboo	7,729	106	576	152	8,305	259	39	298
Central Coast	423	6	32	8	455	14	2	16
Central Kootenay	7,475	103	557	147	8,032	250	38	288
Central Okanagan	25,648	353	1,911	506	27,559	858	131	989
Columbia-Shuswap	6,591	91	491	130	7,082	221	34	254
Comox	8,575	118	639	169	9,214	287	44	331
Cowichan Valley	10,680	147	796	211	11,475	357	54	412
East Kootenay	7,639	105	569	151	8,208	256	39	294
Fraser Valley	39,146	538	2,917	772	42,063	1,310	199	1,509
Fraser-Fort George	12,208	168	910	241	13,118	408	62	471
Metro Vancouver	317,782	4,368	23,677	6,265	341,459	10,633	1,618	12,251
Kitimat-Stikine	4,709	65	351	93	5,060	158	24	182
Kootenay-Boundary	3,948	54	294	78	4,242	132	20	152
Mount Waddington	1,378	19	103	27	1,480	46	7	53
Nanaimo	20,068	276	1,495	396	21,563	671	102	774
North Okanagan	10,729	147	799	212	11,528	359	55	414
Northern Rockies	585	8	44	12	629	20	3	23
Okanagan-Similkameen	10,518	145	784	207	11,301	352	54	405
Peace River	7,897	109	588	156	8,485	264	40	304
qathet	2,492	34	186	49	2,677	83	13	96
North Coast	2,279	31	170	45	2,449	76	12	88
Squamish-Lillooet	5,474	75	408	108	5,881	183	28	211
Strathcona	5,796	80	432	114	6,228	194	30	223
Sunshine Coast	3,756	52	280	74	4,036	126	19	145
Thompson-Nicola	17,250	237	1,285	340	18,536	577	88	665
British Columbia	598,801	8,231	44,615	11,805	643,417	20,036	3,049	23,085

Summary of Deposits, Refunds, Revenues and Expenditures

Costs associated with the collection systems are managed by BRCCC, which operates on a non-profit basis.

a. Refillable Bottles

In the case of refillable bottles, manufacturers are assessed a per-dozen fee for the collection, sorting and return of containers based on projected and audited costs. Costs associated with cleaning and reusing refillable bottles are borne by the manufacturer.

b. Recycled Cans

BRCCC retains unredeemed deposits with respect to can sales and BRCCC retains revenues from aluminum material sales to offset costs related to: administration, transportation, collection, sorting fees and infrastructure. In 2019, there was no additional container cost recovery charged to brewers for cans under the program. BDL, on behalf of BRCCC, has also entered into service agreements with several container return depots for collection and sorting services. BRCCC revenues collected from both cans and bottles pay return location partners for the collection, sorting and return of BRCCC containers.

In the case of the Liquor Distribution Branch, BRCCC continues to operate under an agreement with the agency to pay it handling fees for each container collected from its stores. Licensee retail stores that sign up as contracted collection partners are also paid a handling fee for each container collected.

In accordance with the *Recycling Regulation*, Table 7 outlines the deposits received and paid for each container type.

Table 7 2019 Deposit Summary

	Cans	Industry Standard Bottles (ISB)	Non-ISB Refillable Bottles	Total
Deposits Received (\$)	\$68,134,561	\$3,088,067	\$1,799,309	\$73,021,937
Refunds Paid (\$)	\$59,923,035	\$2,985,565	\$1,489,188	\$64,397,788

Note: The figures are in accordance with an audit of B.C. Brewers' Recycled Container Collection Council Financial Statements and audit procedures in connection with Sections 8(2)(b), (d), and (e) of the Recycling Regulation and deposits received and refunds paid conducted by KPMG LLP.

Secondary Packaging

Costs related to the recovery of secondary packaging are assessed to program brewers based on a per tonne rate set annually which is intended to cover any costs related to the collection of secondary packaging. The efficient collection method in place for decades assists in keeping the program costs relatively low.

8. Plan Performance

Target	2018 Performance	Strategies for Improvement
87.5% recovery/collection rate in each container category	<ul style="list-style-type: none"> • 101.86% return rate for refillable industry standard bottles (ISB) • 86.41% return rate for refillable proprietary glass bottles • 90.38% return rate for aluminum cans • 90.76% return rate overall 	<ul style="list-style-type: none"> • Improve strategy for collection of refillable proprietary glass bottles • Continue to communicate with brewers and collection network regarding categorization of containers
75% Recovery/Collection Rate of secondary packaging material	<ul style="list-style-type: none"> • 78.32% recovery/collection rate attained for secondary packaging 	N/A
Accessibility Targets: Containers — Improve consumer access to BRCCC return locations to 385 (305 LRS, 80 depots) with at least 1 contracted return location in each regional district	<ul style="list-style-type: none"> • 183 return locations (112 LRS, 71 depots) • 26 of 28 regional districts with at least 1 contracted return location 	<ul style="list-style-type: none"> • Reviewing current coverage levels to identify key areas for depot expansion • Perform additional drive time studies to identify potential areas that require increased coverage
Accessibility Targets: Secondary Packaging — 1,152 total return locations	<ul style="list-style-type: none"> • 1,140 total return locations in the BRCCC network • Materials received from Recycle BC are collected through the Recycle BC network which includes additional collection locations not included in the 1,140 reported in the BRCCC network 	<ul style="list-style-type: none"> • Add incremental collection sites to the BRCCC collection network in potential areas that require increased coverage
Accessibility Targets: Drive Time — 80% of population within 10 minute drive of BRCCC authorized return location	<ul style="list-style-type: none"> • 80% of population is within a 10 minute drive of a BRCCC authorized return location 	N/A
Consumer Awareness: Promotion/Education Initiatives — 3 net new consumer promotion/education initiatives throughout the Schedule 1 & 5 plans	<ul style="list-style-type: none"> • At least one net new consumer promotion/education initiative rolled out in each program year 	<ul style="list-style-type: none"> • Continue to promote the collection system and educate the public to increase awareness
Consumer Awareness: Level of Consumer Awareness — 60% level of consumer awareness on consumer awareness survey	<ul style="list-style-type: none"> • 61% consumer awareness survey result 	N/A
Pollution Prevention Hierarchy/ Product Life Cycle Targets: 100% of collected materials for re-use or to recycling commodity markets Secondary Packaging: - Report in accordance with PHP - Track end fate of materials in annual stewardship audit	<ul style="list-style-type: none"> • Aluminum: 100% Processed for metal recovery • Refillable Glass Bottles: <ul style="list-style-type: none"> - 99% of material shipped, sent to brewers for reuse (100% of which were intended to be refilled) - 1% of material shipped, sent directly to a glass recycler for recycling by BDL • 100% of material reported as collected, sent to a recycler for recycling 	<ul style="list-style-type: none"> • Continue to ensure service providers meet processing standards • Work with brewers and other collection locations to strengthen reporting and tracking systems

In closing, BRCCC would like to thank all of our partners and the residents of British Columbia for making the programs successful and for ensuring that container reuse is possible in the province. While the impacts of the COVID-19 crisis remain uncertain at this time, BRCCC looks forward to continued success in the 2020 program and strives to heighten consumer awareness of the packaging recovery system.



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INDEPENDENT ASSURANCE REPORT TO BC BREWERS RECYCLED CONTAINER COLLECTION COUNCIL

To the Directors of BC Brewers Recycled Container Collection Council

Assurance level and subject matter

We have been engaged by BC Brewers Recycled Container Collection Council (“BRCCC”) and the management of Brewers Distributor Limited (“BDL”) (collectively “Management”) to undertake a reasonable assurance engagement in respect of the following disclosures in BRCCC’s Annual Report to the Director, for the 2019 calendar year (together the “Subject Matter”):

- Section 4 (Table 1 and Table 2) *Collection System and Facilities* – the location of collection facilities, and any changes in the number and location of collection facilities from the previous report in accordance with Section 8(2)(b) of BC Regulation 449/2004 (the Recycling Regulation);
- Section 6 (Table 3) *Pollution Prevention Hierarchy and Product/Component Management* – the Company’s description of how the recovered product was managed in accordance with the pollution prevention hierarchy under Section 8(2)(d) of the Recycling Regulation;
- Section 7 (Table 5a and Table 5b) *Product Sold and Collected and Recovery Rate* – the total amounts of product sold and collected and recovery rate in accordance with Section 8(2)(e) of the Recycling Regulation;
- Section 8 (2019 Performance) *Plan Performance* – the Company’s description of performance for the year in relation to targets under Section 8(2)(g) of the Recycling Regulation that are associated with Section 8(2)(b), (d) and (e); and,
- Section 7 (Table 7) BRCCC Deposit Summary – Deposits received and refunds paid of cans, industry standard bottles (ISB) and non-ISB.

Responsibilities

Management is responsible for the preparation and presentation of the Subject Matter that is free of material misstatement and is in accordance with the evaluation criteria.

Management is also responsible for establishing and maintaining appropriate performance management and internal control systems from which the reported Subject Matter is derived, for preventing and detecting fraud and for identifying and ensuring that BRCCC complies with laws and regulations applicable to its activities.



Our responsibility and professional requirements

Our responsibility is to express a reasonable assurance opinion on the Subject Matter information based on the evidence we have obtained. Our opinion does not constitute a legal determination on BRCCC's compliance with the Recycling Regulation.

We conducted our reasonable assurance engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised) Assurance Engagements other than Audits or Reviews of Historical Financial Information, published by the International Federation of Accountants.

We have complied with the relevant rules of professional conduct/code of ethics applicable to the practice of public accounting and related to assurance engagements, issued by various professional accounting bodies, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Canadian Standard on Quality Control 1, Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance Engagements and, accordingly, maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Applicable criteria

Management is responsible for determining the appropriateness of the evaluation criteria. The evaluation criteria presented in Appendix 1 are an integral part of the Subject Matter and address the relevance, completeness, reliability, neutrality and understandability of the Subject Matter.

Summary of work performed

ISAE 3000 requires that we plan and perform this engagement to obtain reasonable assurance about whether the subject matter information is free from material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an engagement conducted in accordance with ISAE 3000 will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of users of our report.

The nature, timing and extent of procedures performed depends on our professional judgment, including an assessment of the risks of material misstatement, whether due to fraud or error, and involves obtaining evidence about the subject matter information.

We believe the evidence we obtained is sufficient and appropriate to provide a basis for our opinion.

Inherent Limitations

Non-financial information, such as that included in the Report, is subject to more inherent limitations than financial information, given the characteristics of significant elements of the subject matter and the availability and relative precision of methods used for determining both qualitative and quantitative information. The absence of a significant body of established practice on which to draw allows for the selection of different, but acceptable, measurement techniques which can result in materially different



measurements and can impact comparability. The nature and methods used to determine such information, as described in management's internally developed criteria, may change over time. It is important to read the applicable criteria in Appendix 1.

Opinion

In our opinion, the Subject Matter within the BDL Annual Report for the year ended December 31, 2019 presents fairly in accordance with the evaluation criteria, in all material respects:

- Location of collection facilities, and any changes in the number and location of collection facilities from the previous report in accordance with Section 8(2)(b) of the Recycling Regulation;
- the description of how the recovered product was managed in accordance with the pollution prevention hierarchy under Section 8(2)(d) of the Recycling Regulation;
- the total amounts of the producer's product sold and collected and, if applicable, the producer's recovery rate in accordance with Section 8(2)(e) of the Recycling Regulation;
- the performance for the year in relation to targets under Section 8(2)(g) of the Recycling Regulation that are related to Section 8(2)(b), (d) and (e); and,
- the total amount of deposits received and refunds paid on cans, ISB and non-ISB.

Emphasis of matter

Without qualifying our opinion we draw attention to the following sections in the Annual Report which are critical to an understanding of the disclosures related to treatment of recovered containers in 2019:

- As disclosed in Section 6 (Table 3) in the Annual Report, 99% of refillable bottles were sent to brewers for reuse. We note that the actual rate of reuse by brewers is not reported to BDL and was not within the scope of our audit.
- As discussed in Section 4 the secondary packaging recovered of 3,049 tonnes reported in Section 7 (Table 5(b)) includes 1,208 tonnes of cardboard material purchased from Recycle BCs recovery network and other recyclers. This tonnage is a subset of the total tonnage of secondary packaging processed by Recycle BC and other recyclers.

Toronto, Canada
June 16, 2020



APPENDIX 1 TO THE AUDITOR'S REPORT

EVALUATION CRITERIA

COLLECTION FACILITIES

Specific Disclosures in the annual stewardship report for which evaluation criteria were developed	
Disclosure per annual report	Annual Report Reference
Total Contracted Collection Facilities – 183 locations	4. Collection System and Facilities table 2 on Page 7
Location of contracted collection facilities – by region	4. Collection System and Facilities table 2 on Page 7
Change in the number and locations of contracted collection facilities in 2019 – Comparison between 2019 and 2018	4. Collection System and Facilities table 2 on Page 7

The following evaluation criteria were applied to the assessment of the location of collection facilities, and any changes in the number and location of collection facilities from the previous report in accordance with Section 8(2)(b) of the Recycling Regulation:

1. Total number of contracted collection facilities includes Licensee Retail Stores, Government Liquor Stores and BDL authorized depots and their satellites that BDL has a contractual relationship with.
2. Collection facilities are divided into 28 regional districts in BC based on the address in BDL's J.D. Edwards system. Addresses of the facilities per BDL are reconciled with those provided by Liquor Distribution Branch (LDB) where applicable at a regional district level.

Changes in the number and location of collection facilities are calculated based on comparison to the previous year's list by regional district.



PRODUCT SOLD AND COLLECTED

Specific Disclosures in the annual stewardship report for which evaluation criteria were developed	
Disclosure per annual report	Annual Report Reference
BRCCC Container Sales 2019 (dozens): ISB – 2,431,826 Non-ISB – 1,436,144 Total Refillables – 3,867,970 Cans – 55,210,900 BRCCC Container Recovery 2019 (dozens): ISB – 2,476,963 Non-ISB – 1,240,990 Total Refillables – 3,717,953 Cans – 49,900,119 BRCCC Container Recovery Rates 2019: ISB – 101.86% Non-ISB – 86.41% Total Refillables – 96.12% Cans – 90.38%	7. Product Sold and Collected and Recovery Rate Table 5a on Page 11
Secondary Packaging 2019: Tonnes Generated – 3,893 Recovered – 3,049 Recovery Rate 2019: 78.32%	7. Product Sold and Collected and Recovery Rate Table 5b on Page 11

The following evaluation criteria were applied to the assessment of the description of how total amounts of the producer’s product sold and collected, the tonnes of secondary packaging generated and recovered and the recovery rates has been calculated in accordance with Section 8(2)(e):

1. Product sold: The total number of bottles or cans sold is based on the sales



figures received from the LDB

2. Product collected - bottles:

- The total number of bottle returns (product collected) is calculated as follows: Closing inventory balance - Opening inventory balance + Returns to brewers during the calendar year.
- The quantity of bottles returned to brewers from BDL warehouses is based on records in the J.D. Edwards system.
- Opening and closing inventory balances at BDL warehouses are based on year-end physical counts as recorded in the J.D. Edwards system.

3. Product collected- cans: Total number of can returns is based on the total recorded in the J.D. Edwards system during the calendar year.

4. Secondary Packaging - The tonnes generated is based on information provided by the brewers.

5. Secondary Packaging - The tonnes recovered is based on:

- The amount of acquired material from Recycle BC and other recyclers.
- The amount of secondary packaging that the LDB report has recovered; this is determined based on the rate of beer packaging material as a percentage of total packaging material recovered by LDB.
- The amount of secondary packaging the brewers report as recovered.

Management of Recovered Product

Specific Disclosures in the annual stewardship report for which evaluation criteria were developed	
Disclosure per annual report	Annual Report Reference
Aluminum cans: <ul style="list-style-type: none"> • 100% processed for material recovery Refillable glass bottles: <ul style="list-style-type: none"> • 1% of material shipped, sent directly to a glass recycler for recycling by BDL • 99% of material shipped, sent to brewers for reuse 	7. Pollution Prevention Hierarchy and Product/Component Management Table 3 on Page 9

The following evaluation criteria were applied to the assessment of the description of the recovered product was managed in accordance with the pollution prevention hierarchy under Section 8(2)(d) of the Recycling Regulation:

1. Aluminum cans



The total weight of cans received by the aluminum recycler is based on the aluminum recycler’s confirmation of each shipment by BDL during calendar year 2019. Total weight confirmed by the aluminum recycler is reconciled with total weight shipped by BDL. End fate of aluminum cans is based on qualitative end fate data reported by the aluminum recycler to BDL.

2. Refillable bottles sent directly from BDL for recycling

The quantity of bottles/glass sent by BDL to the glass recycler for recycling is determined based on J.D.Edwards system data on empty shipments to the glass recycler with the description “ditched bottles”.

The % sent directly from BDL for recycling is calculated as: the quantity of bottles/glass sent to the glass recycler during the reporting year (equivalent of dozens) divided by the total quantity of bottles/glass sent to the glass recycler and bottles sent to brewers during the reporting year (equivalent of dozens).

3. Refillable bottles sent to brewers:

The quantity of bottles sent to brewers for reuse is determined based on J.D.Edwards system data on empty shipments to brewers.

The % sent to brewers is calculated as: the quantity of bottles sent to brewers during the reporting year (equivalent of dozens) divided by the total quantity of ditched bottles/glass sent to the glass recycler and bottles sent to brewers during the reporting year (equivalent of dozens)

Following the instruction in Waste Prevention Branch’s email to Stewards on February 18, 2016: *“Reuse” of a product as it was originally intended (e.g. bottles) does not need to be assured beyond when the product is shipped from the program if evidence is provided that demonstrates the intent is reuse (e.g. the auditor will not need to confirm the actual reuse of the individual product).*

TARGETS

Specific Disclosures in the annual stewardship report for which evaluation criteria were developed	
Disclosure per annual report	Annual Report Reference
Recovery Targets (Containers): 2019 Assertion – Targets partially achieved: 101.86% return rate for refillable industry standard bottles (ISB) 86.41% return rate for refillable proprietary glass bottles 90.38% return rate for aluminum cans 90.76% return rate overall	8. Plan Performance on Page 14



Specific Disclosures in the annual stewardship report for which evaluation criteria were developed	
Disclosure per annual report	Annual Report Reference
Recovery Targets (Secondary Packaging): 2019 Assertion – Target achieved 78.32% recovery/collection rate attained for secondary packaging	8. Plan Performance on Page 14
Accessibility Targets (Containers): 2019 Assertion – Targets not achieved: 112 private licensee retail stores 71 depots 26 of 28 regional districts with at least 1 contracted return location	8. Plan Performance on Page 14
Accessibility Targets (Secondary Packaging): 2019 Assertion – Targets not achieved: 1,140 total return locations in the BRCCC network Materials received from Recycle BC are collected through the Recycle BC network which includes additional collection locations not included in the 1,140 reported in the BRCCC network	8. Plan Performance on Page 14
Pollution Prevention Hierarchy/Product Life Cycle Targets: 2019 Assertion – Targets achieved: Aluminum: 100% Processed for metal recovery Refillable Glass Bottles: 99% of material shipped, sent to brewers for reuse (100% of which were intended to be refilled) 1% of material shipped, sent directly to a glass recycler for recycling by BDL Secondary Packaging: 100% of material reported as collected, sent to a recycler for recycling	8. Plan Performance on Page 14

The following evaluation criteria were applied to the assessment of the description of performance for the year in relation to targets in the approved stewardship plan under Section 8(2)(b), (d) and (e) of the Recycling Regulation.



1. Recovery Targets: Recovery rate of 87.5% overall and for each container type
 Recovery rate is calculated as follows: container returned during the period ÷ container sold during the period. The description of progress against targets to date is supported by records of progress maintained by the Company.
2. Recovery Targets: Secondary packaging 75% of secondary packaging material
3. Accessibility Targets (Containers): 385 unlimited return locations (305 Licensee Retail Stores (LRS), 80 depots) and at least 1 unlimited return location in each regional district
 Unlimited Collection Partners are those locations active as of Dec 31 that have a contractual relationship with BDL to collect unlimited containers from customers, and refund customers the full amount of the deposit per bottle or can. The description of progress against targets to date is supported by records of progress maintained by the Company.
 Regional district is allocated based on address of the collection facility.
4. Accessibility Targets (Secondary Packaging): 1,152 total authorized return locations to which consumers can make returns.
5. Pollution Prevention Hierarchy/Product Life Cycle Targets: 100% of collected materials for re-use or to recycling commodity markets

The percentage of material components recycled, landfilled or safely destroyed as presented in the Annual Report is estimated based on general representations from third party processors.

DEPOSIT RECEIVED AND REFUNDS PAID OF CANS

Specific Disclosures in the annual stewardship report for which evaluation criteria were developed	
Disclosure per annual report	Reference



Deposits Received: Cans - \$68,134,561 ISB - \$3,088,067 Non-ISB Refillable Bottles - \$1,799,309 Refunds Paid: Cans - \$59,923,035 ISB - \$2,985,565 Non-ISB Refillable Bottles - \$1,489,188	7. Product Sold and Collected and Recovery Rate Table 7 on Page 13
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The following evaluation criteria were applied to the assessment of the description of total amount of deposits received and refunds paid of cans, ISB and non-ISB as required under Section 8(2)(f)(i):

1. The deposits received are based on funds received from LDB by BRCCC during the period from January 1, 2019 to December 31, 2019 recorded in the general ledger of BRCCC.
2. The refunds paid are based on payments to collection facilities during the period from January 1, 2019 to December 31, 2019 recorded in the general ledger of BDL.